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September 1996

Remediation Technologies Development Forum

RTDF

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RTDF Action Teams

Lasagna™ Partnership

Bioremediation Consortium

Permeable Barriers Action Team

IINERT Soil-Metals Action Team

Sediments Remediation Action Team

What is the RTDF?

The Remediation Technologies Development Forum (RTDF) was established in 1992 by the U.S. Environmental Protection Agency (EPA) after industry representatives met with the Administrator to identify ways of working together to solve complex hazardous-waste remediation problems. The RTDF has grown to a consortium of partners from industry, several government agencies, and academia who share the common goal of developing more effective, less costly hazardous waste characterization and treatment technologies.

The RTDF is one of a few government programs designed to foster public-private partnerships to conduct laboratory and field research to develop, test, and evaluate innovative remediation technologies. Through the unprecedented collaboration of the RTDF, companies, government agencies, and universities are voluntarily sharing knowledge, experience, equipment, facilities, and even proprietary technology to address mutual remediation problems.

What is the RTDF Vision?

The purpose of the RTDF is to identify what government and industry can do together to develop and improve the environmental technologies needed to address their mutual cleanup problems in the safest, most cost-effective manner. The RTDF fosters public- and private-sector partnerships to undertake the research, development, demonstration, and evaluation efforts needed to achieve common cleanup goals.

What is the RTDF Mission?

The RTDF is dedicated to advancing the development of more permanent, cost-effective technologies for the remediation of hazardous wastes. The RTDF works to achieve this goal by:

- Identifying priority remediation technology development needs.
- Establishing and overseeing action teams to plan and implement collaborative research projects to address remediation problems.
- Addressing scientific, institutional, and regulatory barriers to innovative treatment technologies.

What is the RTDF Structure?

The RTDF establishes self-managed action teams that bring members together to work on their highest priority problems. These teams:

- Share information about planned and ongoing research.
- Define research needs, develop detailed research project plans, and implement projects that often entail field-scale demonstrations.
- Ensure that all research is founded on sound scientific and engineering principles.
- Enlist partners to support and participate in the collaborative research effort, either with in-kind support or direct funding.
- Produce and disseminate scientifically credible results to facilitate broad acceptance of the technology.

How Are New Research Areas Selected?

Research areas and priorities are determined by consensus of the members of the RTDF. Organizations interested in pursuing a specific research topic organize an action team to implement the research project.

Who Can Join the RTDF?

RTDF meetings are open and all interested organizations are welcome to participate. RTDF members include industries facing a variety of remediation problems (e.g., chemical, petroleum, and pharmaceutical companies and various manufacturers), federal agencies, national laboratories, research centers and institutes, and universities.

What Are the Roles of the Action Team Members?

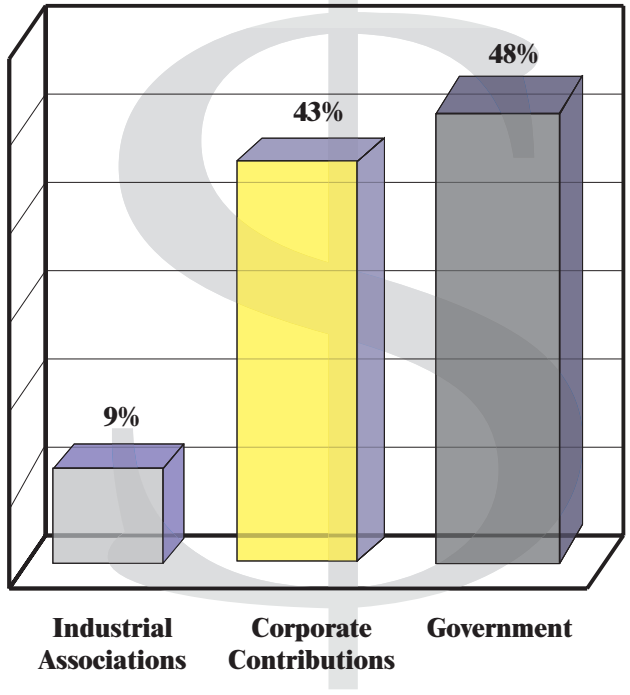
EPA facilitates the operation of the Action Teams and the RTDF Steering Committee, and contributes its research efforts to the jointly-led projects. EPA also assists in working with states and other regulatory agencies to conduct demonstration projects.

Industrial participants help set priorities based on remediation problems they face, serve as co-team leaders, and offer both in-kind and monetary resources to support joint projects. The Department of Energy (DOE) and the Department of Defense (DOD) and other federal agencies suggest priority problems in their roles as owners of contaminated sites, as well as offer sources of funding and make joint research contributions. They also fulfill a vital function by contributing military bases and facilities with contamination problems at which field-scale testing can be conducted. Universities and other research institutions provide state-of-the-art science and engineering expertise from their existing research base and help assure that sound engineering and scientific principles are followed.

What Are the Funding Sources?

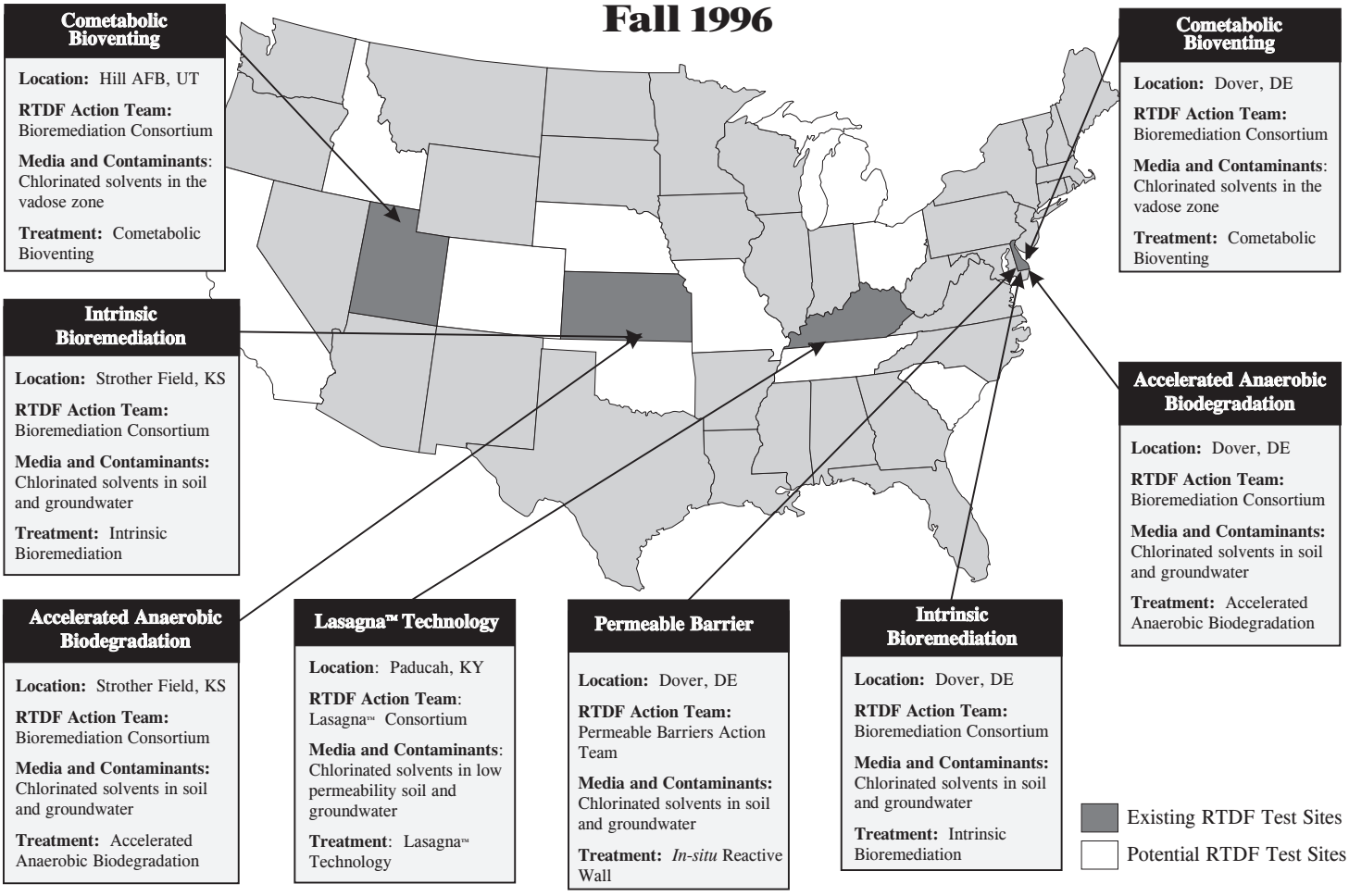
EPA provides funding for RTDF research activities, as well as support for RTDF and Action Team meetings. Other federal agencies, e.g., DOE and DOD, as well as industrial and academic participants are providing funding, laboratory, and field support for research activities undertaken by the Action Teams. Participants in each Action Team provide funding and/or in-kind support for specific research efforts of the team. The RTDF is currently supporting approximately $20 million of research efforts.

Funding Sources for RTDF Field Work



Action Team Field Sites

Fall 1996



What Are the RTDF Priority Research Areas?

Five Action Teams have been formed to address priority research areas. The activities undertaken by these Action Teams focus on the development, testing, and evaluation of *in-situ* remediation technologies. The priorities and activities of the teams include:

Lasagna™ Consortium–Design, develop, and demonstrate a technology that utilizes electroosmosis as a liquid pump for flushing contaminants from the soil into the treatment zones for degradation.

Bioremediation Consortium–Design, demonstrate, and evaluate enhanced anaerobic biodegradation of chlorinated solvents in soils and groundwater; generate data needed to determine the effectiveness of intrinsic bioremediation (natural biological degradation) as an accepted remedial approach; and develop a cost-effective bioventing process that promotes the cometabolic bioremediation of chlorinated solvents in the vadose zone.

Permeable Barriers Action Team–Develop and test the effectiveness of permeable barrier technology for the remediation of chlorinated solvents, metals, radionuclides, and other pollutants in groundwater.

In-Place Inactivation and Natural Ecological Restoration (IINERT) Soil-Metals Action Team–Develop and demonstrate in-place inactivation and natural ecological restoration technologies that reduce and eliminate the risks to human health and the environment of metals/metalloids in soil.

Sediments Remediation Action Team–Develop and/or evaluate passive, *in-situ* techniques to remediate sediment contamination; investigate the mechanisms and rates of natural biological degradation; and enhance or develop assessment procedures to evaluate the need for and success of remedial activities.

Coordination With Other Groups–The RTDF interacts and communicates with other consortia including the Consortium for Site Characterization Technology, the Advanced Applied Technology Demonstration Facility, and the Western Governors Association.

Who are the RTDF Participants?

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ASARCO
AT&T
Battelle Memorial Institute
Beak International
Beazer East, Inc.
Bethlehem Steel Corporation
Ciba Geigy Corporation
Conoco, Inc.
Doe Run Company
Dow Chemical Company
DuPont
Electric Power Research Institute
Elf Aquitaine, Inc.
EnviroMetal Technologies, Inc.
ETHYL Corporation
Exxon Research & Engineering Co.
FMC Corporation
General Electric
General Motors Corporation
ICI Americas
International Business Machines Corporation
3M Corporation
Merck & Co., Inc.
Mobil Oil Corporation
Monsanto Company
PPG Industries, Inc.
Shell Development Company
Texaco, Inc.
Westinghouse Savannah River Co.
Zeneca, Inc.

Advanced Applied Tech. Demonstration Facility*
Gulf Coast Hazardous Substance Research Center*
Los Alamos National Laboratory
National Center for Intrinsic Bioremediation Research and Development*
National Center for Manufacturing Sciences*
U.S. Air Force
U.S. Army Corps of Engineers
U.S. Army Environmental Center
U.S. Department of Agriculture
U.S. Department of Defense
U.S. Department of Energy
- Argonne National Laboratory
- Idaho National Engineering Laboratory
- Oak Ridge National Laboratory
- Pacific Northwest Laboratory
- Sandia National Laboratory

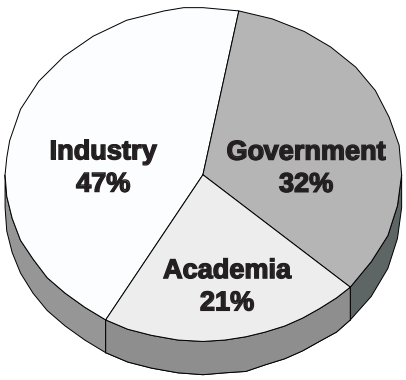
U.S. Department of Interior
U.S. Environmental Protection Agency
- National Exposure Research Laboratory
- National Health and Environmental Effects Research Laboratory
- National Risk Management Research Laboratory
- Technology Innovation Office

U.S. Navy
- Naval Research Laboratory

*Research centers funded primarily by the federal government

Cornell University
Michigan State University
New Mexico Tech
Northwestern University
Rice University
Stanford University
The Johns Hopkins University
University of Cincinnati
University of Michigan
University of Tennessee
University of Waterloo
Waste Policy Institute

RTDF Members by Type of Organization



Would You Like More Information?

For more information on the RTDF or the Action Teams, please contact:

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To request other RTDF factsheets, please write/fax to:

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